UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

JUL 26 1989

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Donna Green
E.S.H.D.
Department of Energy
Argonne, IL 60439

Dear Ms. Green:

Thank you for your phone call to the United States Environmental Protection Agency (U.S. EPA), regarding construction of the Advanced Photon Source at Argonne National Laboratory (Argonne). As you know, Argonne is subject to the Radionuclides National Emission Standards for Hazardous Air Pollutants (Radionuclides NESHAP), 40 C.F.R. Part 61, Subpart H.

Under the NESHAP General Provisions, an owner or operator shall submit to U.S. EPA an application for approval of the construction of any new source or modification of an existing source. 40 C.F.R. §61.07. The application shall be submitted before the construction or modification is planned to commence. "Construction" means "fabrication, erection, or installation of an affected facility." 40 C.F.R. §61.02. "Modification" means "any physical or operation change to a stationary source which results in an increase in the rate of emission to the atmosphere of radionuclides." 40 C.F.R. §61.15.

In your phone call to U.S. EPA, you asked what actions would constitute "commenced construction or modification," and more specifically, you wanted to know whether or not clearing the site of trees would constitute "commenced construction or modification."

According to 40 C.F.R. §61.02, "commenced" means "that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete within a reasonable time, a continuous program of construction or modification." Under this definition, site clearing would constitute commenced construction if it were part of a continuous program of construction or modification or if a contract was in place to undertake and complete a continuous program of construction or modification of which site clearing was a part.

If you would like U.S. EPA to determine whether or not site clearing would constitute "commenced construction or modification" in your specific situation, then Argonne must send U.S. EPA a written application pursuant to 40 C.F.R. §61.06. This section of the regulation reads in pertinent part: "An owner or operator may submit to the Administrator a written application for a determination of whether actions intended to be taken by the owner or operator constitute construction or modification, or commencement thereof."

Thus, Argonne has the prerogative to submit to U.S. EPA a written application for a determination of whether actions related to the Advanced Photon Source constitute construction or modification or commencement of construction or modification. Pursuant to 40 C.F.R. §61.06, U.S. EPA would be required to notify Argonne of its determination within 30 days after receiving sufficient information to evaluate the application.

In regard to your second question concerning the content of an application for approval to construct or modify, 40 C.F.R. §61.07 sets forth the requirements. U.S. EPA, Region V has developed a list of items to assist you in fulfilling these requirements (See Enclosure). Please be advised that U.S. EPA may request any additional information if during its review U.S. EPA determines that such information is necessary to evaluate the application. Please also be advised that upon promulgation of the new Radionuclides NESHAP in the fall of 1989, the requirements pertaining to applications to construct or modify may change.

An application for approval to construct or modify, submitted pursuant to 40 C.F.R. §61.07, or an application for a determination of construction or modification should be sent to: David Kee, Director, Air and Radiation Division, U.S. EPA, Region V, (5AC-26), 230 South Dearborn Street, Chicago, Illinois, 60604.

If you have any question pertaining to this letter, contact Linda L. Hamsing at (312) 886-6814.

Sincerely yours,

Larry F. Kertcher

Larry F. Kertcher, Chief
Air Compliance Branch (5AC-26)

Enclosure

cc: Terrence McLaughlin
Office of Radiation Programs

Enclosure

Content of an Application for Approval
of Construction or Modification

I Name and Address of the Owner or Operator

Provide the address of the facility where the radionuclides may be released as well as the address of the owner or operator, if they are not the same.

II Location of the Source

Provide: (1) plant layout on a topographic map showing boundaries; (2) location of the proposed construction or modification; (3) location of other existing sources (including those not constructed or modified that have received approval to construct or modify); (4) topographic characteristics of the area; (5) location of National Weather Service or on-site/local points for meteorological observations; (6) latitude and longitude (within 1 minute) of center of site; and (7) location of the nearest unrestricted area where an individual resides or abides.

III Identification of Radionuclides

Provide the type of radionuclides emitted by the new construction or modification and the annual quantity projected to be released in curies per year (Ci/y) under normal operating conditions. Evaluate the potential for release under abnormal circumstances which can be reasonably foreseen. Also, provide information such as: (1) the number and location of emission points; (2) the identity and activity of radionuclides released from each point; (3) the monitoring program for measuring these emission; (4) stack heights, and diameters; and (5) exit velocities, and temperatures. Provide any other relevant information which may be used to determine dose to the nearest receptor from radionuclides released by the proposed construction or modification.

IV Process Characterization

Provide a brief description of the nature, size, and design, and method of operation of the new construction or modification including the operating design capacity. Provide a process flow diagram with operating rates, operating schedule, and projected releases during normal operations. Estimate releases from abnormal operations under reasonably foreseeable circumstances. If the feed material can vary in radionuclide content, describe the measures that will be taken to verify the composition of the feed materials.

V Estimate Dose

Estimate the annual effective dose equivalent to any member of the public at the offsite point of maximum annual air concentration where there is a residence, school, or office. The effective dose equivalent should be calculated using the computer models AIRDOS-EPA and RADRISK (CAP-88 Version). A copy of the AIRDOS-EPA/RADRISK computer output showing all input parameters used, and the annual effective dose equivalent in all 16 compass directions for receptor points beginning with the nearest individual and extending outward for 1,000 meters farther in 100-meter increments should be included. Estimate of the doses caused through each pathway should be provided. If the dose is caused by a mixture of radionuclides, provide estimates of the dose contributed by each individually.

Doses arising from the proposed construction or modification should be estimated as well as the increase in dose from the entire facility arising from the construction or modification.

VI Abnormal Circumstances Analysis

Provide a list of possible abnormal circumstances which can be reasonably foreseen to occur as a result of operation of the equipment involved in the new construction or modification (e.g. full beam loss for a reasonably foreseeable duration, offnormal operations, etc.), the relative likelihood of each such circumstance, and an estimate of the effective dose equivalent (based on the most appropriate method for the circumstance) associated with the circumstance which results in the maximum estimated dose, and an explanation of the methodology used to conduct the analysis.

VII Control Equipment

Provide a description of the existing control equipment for each emission point. Describe both primary and secondary control device(s) for radionuclide emissions. Estimate control efficiency (percent) for each control device, and provide a basis for these estimates.

Standard bcc's: Official file copy w/attachment(s)
Originators copy w/attachment(s)
Originating organization reading file w/attachment(s)

Other bcc's: Arenberg w/attachment
Gulezian w/attachment
Czerniak w/attachment
Varner w/attachment

5ARD:ACB:HAMSING:BOYDISK #3:LH:07/07/89

saved: DOE.LH